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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/517,802

12/10/2004

Kevin S. Davies

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BACHMAN & LAPOINTE, P.C.
900 CHAPEL STREET
SUITE 1201
NEW HAVEN, CT 06510

EXAMINER

BONK, TERESA

ART UNIT

PAPER NUMBER

3725

MAIL DATE

DELIVERY MODE

12/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/517,802

Applicant(s)

DAVIES, KEVIN S.

Examiner

Teresa M. Bonk

Art Unit

3725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 14, 20-23, 26-31, 34, 35 and 42-59 is/are rejected.
- 7) ☒ Claim(s) 8-13, 15-19, 24, 25, 32, 33 and 36-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The comparison to "a finger of the operator's body" is an unknown value and therefore "the predetermined value" cannot be compared.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-2, 5-6, 20-21, 27-29, 44-46, 48-51, and 54-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Lindstrom (US Patent 6,644,080). Lindstrom discloses a safety system for use with a machine with a moving part having a laser-light emitting means

(52), the axis of the emitted light being aligned to illuminate a region including at least a portion of the moving part's path movement (see Figure 4); a light receiving means (54) arranged to receive light from the emitting means, and a processing and control means (18) arranged to receive information from the light receiving means and to recognize the presence of a shadowed region within the vertical and horizontal extents of the illuminated region on the light receiving means cast by obstructions (38) in the region wherein there is sufficient information to determine the shadow's boundaries and control movement of the part.

With regards to claim 2, the control means either slows or stops the movement of the part (gripper mechanism 40) if the controls means determines the presence of an obstruction in a predetermined or calculated area of the region.

With regards to claims 5 and 6, both a single parallel beam of light (Figure 4) and an array of individual light beams (Figure 3, 5, and 6) are disclosed that create a region larger than the leading edge of the part (10).

With regards to claim 20, the light receiving means includes a charge couple device (CCD), Column 6, line 13.

With regards to claim 21, the light receiving means comprises a projection screen and image information is detect by a camera arranged to observe the image on the projection screen, Column 6, lines 58-60.

With regards to claim 27, a display device (60) is provided to display the images received by the light receiving means.

With regards to claims 44-46 and 54, the machine is a bending machine and the moving part could be the upper tool 10 or the lower tool/anvil 4, Column 4, lines 17-26. The moving part is arranged to bend material.

With regards to claims 55-57, the moving part is considered to be the gripper mechanism (40).

5. Claims 1-5, 7, 14, 22-23, 28-31, 34-35, 42-44, 46, 48-52, and 54-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Fornerod et al. (US Patent 4,772,801). Fornerod et al. discloses a safety system for use with a machine with a moving part having a light emitting means (1) including a laser diode (5) and a transmitting end lens arrangement including a concave and aspheric lens and a lens to correct for spherical aberration (6 and 7), the axis of the emitted light being aligned to illuminate a region including at least a portion of the moving part's path movement; a light receiving means (4) including an aperture (15) arranged to receive light from the emitting means, and a processing and control means (20) arranged to receive information from the light receiving means and to recognize the presence of a shadowed region within the vertical and horizontal extents of the illuminated region on the light receiving means cast by obstructions (9) in the region wherein there is sufficient information to determine the shadow's boundaries and control movement of the part (see Figure 4).

With regards to claims 2-4, the control means either slows or stops the movement of the part (tool 10) if the controls means determines the presence of an obstruction in a predetermined or calculated area of the region, Column 3, lines 22-23. The control means calculates the positions of the obstructions relative to the part and slows or stops the part dependent on the

relative positions and calculates the speeds of the movement of the obstructions relative to the part and slows or stops the part dependent on the relative speeds, Column 2, line 61+ - Column 3, line 36.

With regards to claim 5, a single parallel beam of light is disclosed that create a region larger than the leading edge of the part (10).

With regards to claim 14, the control means is arranged to determine the thickness of an obstruction casting shadow in the light receiving means and allow continued movement the part, Column 37-52.

With regards to claims 22 and 23, the light emitting/receiving means are mounted to be stationary relative to the machine have the moving part (Figures 2 and 3).

With regards to claim 42, the light receiving means includes a receiving end reflector (17).

With regards to claims 44 and 46, the machine is a bending machine and the moving part is the upper tool (10). The moving part is arranged to bend material.

Allowable Subject Matter

6. Claims 8-13, 15-19, 24-25, 32-33, and 36-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. With regards to the Applicant's comment on page 12, the Applicant is invited to call anytime to schedule an interview if deemed necessary.

With regards to the Applicant's comments on page 13 and 14, it is unclear to the Examiner what the applicant is arguing since no 35 U.S.C. 112 (6) rejection was made.

Applicant's arguments filed December 3, 2007 with regards to the Lindstrom and Fornerod references and pages 13 and 14 and have been fully considered but they are not persuasive. The Applicant states that both of these references does not provide for safety purposes. The references are capable of providing safety and are capable of performing the steps as claimed. A reference does not need to explicitly state an exact term or element to meet claim limitations, but have equivalent structure and/or be capable of achieving the function.

Applicant's arguments, see page 15, filed December 3, 2007, with respect to the combination of the Fornerod and Dissey references have been fully considered and are persuasive. The rejection of claims 15 and 16 has been withdrawn.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Teresa M. Bonk whose telephone number is (571) 272-1901. The examiner can normally be reached on M-F 9:00 AM - 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Banks Derris can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Teresa M. Bonk
Examiner
Art Unit 3725



DERRIS H. BANKS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700